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NEGATIVES OF *JUPITER* MADE AT THE LICK OBSERVATORY DURING 1890.

Jupiter was photographed at the Lick Observatory during the last opposition on the dates given in the following tables. The telescope was available for photography on only two nights per week. The negatives give a tolerably complete and an entirely trustworthy history of the planet during the opposition. No change of any special importance could have occurred without quick detection. The work will be continued at the next opposition; and a second series of negatives of longer exposure will probably be taken which will give the four satellites. Such a series will admirably serve to determine the orbits of these bodies.

Negatives of Jupiter in focus have been made on the following dates:

Date, 1890.	P. s. t.	Exposed by	Developed by
July 14	about 12^h	E. S. H. and W. W. C.	E. E. B.
" 21	$12^h\ 0^m$—$12^h\ 9^m$	" " "	W. W. C.
" 27	10 49 —10 54	" " "	"
Aug. 3	11 53 —11 55	" " "	"
" 4	12 13 —12 20	" " "	"
" 10	11 4 —11 10	" " "	"
" 11	—— —11 36	" " "	"
" 18	10 15 —10 20	" " "	"
" 24	9 37 — 9 43	" " "	"
" 25	9 58 —10 2.5	" " "	E. E. B.
Oct. 26	7 20 — 7 28	" " J. E. K.	"
Nov. 3	7 0 — 7 8	" " J. M. S.	S. W. B.

Each negative is on an 8 x 10 plate and contains from 6 to 20 separate images of the planet made with apertures of 33 or 22½ inches with an exposure (usually) of $0^s.13$.

Negatives of Jupiter enlarged in the telescope 8.3 times have been made on the dates and at the times given below.

Date, 1890.	P. s. t.	Exposed by	Developed by
	h m ; m m m m m		
July 8	13 3 ; 5	E. S. H. and W. W. C.	W. W. C.
" 8	13 11 ; 13	" " "	"
" 8	13 25 ; 27	" " "	"
" 8	13 34 ; 36	" " "	E. E. B.
" 13	13 11 ; 13	" " "	W. W. C.
" 13	13 24 ; 26	" " "	"
Aug. 31	10 24 ; 25	" " "	"
Sept. 1	10 3.5; 4.5	" " "	"
" 8	10 1 ; 9 ; 11	" " J. M. S.	E. E. B.
" 14	9 14 ; 15	" " J. E. K.	"
" 15	8 17.5; 21	" " J. M. S.	"
" 21	8 8 ; 10	" " J. E. K.	"
" 22	7 25 ; 26	" " J. M. S.	"
Oct. 5	7 52 ; 56	" " J. E. K.	"
" 6	7 13 ; 15	" " J. M. S.	"
" 13	7 5 ; 14; 51; 52; 53; 55	" " "	"
" 19	7 17 ; 19; 29; 30	" " J. E. K.	"
" 20	7 45 ; 49	" " J. M. S.	"
" 27	7 8 ; 10	" " "	"
Nov. 2	6 43 ; 45	" " A. J. B.	S. W. B.
" 3	6 36 ; 38	" " "	"

There are usually two images of the planet on each 4 x 5 plate. If the plate is held about 38½ inches from the eye, this position corresponds to a magnifying power of 100; if 7.7 inches to 500. Quite a number of other negatives were made (on the same dates) but the above are those selected for preservation. Nearly a complete set has been presented to the Royal Astronomical Society, and individual negatives have been deposited with various learned societies in America and in Europe. E. S. H.